

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF NORTH CAROLINA

OPTOLUM, INC.)	
)	
Plaintiff,)	
)	
v.)	1:17CV687
)	
CREE, INC.,)	
)	
Defendant.)	FILED UNDER SEAL

MEMORANDUM OPINION AND ORDER
ADDRESSING EXPERT WITNESS AND DAUBERT MOTIONS
(Docs. 193, 197, 199)

OSTEEN, JR., District Judge

Presently before this court are Defendant Cree, Inc.'s ("Cree") motion to exclude certain testimony of William B. Scally, (Doc. 193); Defendant Cree's motion to exclude certain testimony of Charles McCreary, (Doc. 197), and Plaintiff OptoLum, Inc.'s ("OptoLum") motion to exclude certain testimony of Dr. Eric Bretschneider, (Doc. 199). Although these issues may be moot as a result of the jury's verdict, the parties are entitled to consider this court's reasoning in full for purposes of any Motion for Judgment as a Matter of Law or appeal.

I. FACTUAL AND PROCEDURAL BACKGROUND

Plaintiff and Defendant are companies that produce lighting products using light-emitting diodes ("LEDs"). (Amended

Complaint (Doc. 32) ¶¶ 12, 20, 22-23, 29.)¹ Plaintiff seeks to enforce U.S. Patents 6,831,303 (the "'303 Patent"), and 7,242,028 (the "'028 Patent") in this action (together, the "Patents"). (Id. ¶¶ 25-27.)

Both parties plan to present evidence at trial through expert witnesses. Relevant to this order, Plaintiff has offered William Scally as an expert on a reasonable royalty for Defendant's alleged infringement. (Scally Report (Doc. 299).) Plaintiff has also offered Charles McCreary as an expert to testify about Defendant's alleged infringement. (McCreary Report (Doc. 212-2).) Defendant has offered Dr. Eric Bretschneider as an expert to rebut Mr. McCreary's infringement opinion. (Bretschneider Am. Report (Doc. 201-3).)

Defendant moved to exclude certain testimony of Mr. Scally, (Doc. 193), and submitted a brief in support of its motion. (Mem. of Cree, Inc. in Supp. of Daubert Mot. Precluding Certain Testimony of William B. Scally ("Def.'s Scally Br.") (Doc. 194).) Plaintiff responded, (OptoLum, Inc.'s Opp'n to Cree, Inc.'s Daubert Mot. to Exclude Certain Testimony of William B. Scally ("Pl.'s Scally Resp.") (Doc. 205)); and Defendant

¹ All citations in this Memorandum Opinion and Order to documents filed with the court refer to the page numbers located at the bottom right-hand corner of the documents as they appear on CM/ECF.

replied, (Doc. 216). Defendant also moved to exclude certain testimony of Mr. McCreary, (Doc. 197), and submitted a brief in support of its motion. (Mem. of Cree, Inc. in Supp. of its Daubert Mot. to Exclude Certain Testimony of Charles McCreary ("Def.'s McCreary Br.") (Doc. 198).) Plaintiff responded, (OptoLum, Inc.'s Opp'n to Cree, Inc.'s Mot. to Exclude Certain Testimony of Charles McCreary ("Pl.'s McCreary Resp.") (Doc. 209)), and Defendant replied, (Reply Mem. of Cree Inc. in Supp. of its Daubert Mot. to Exclude Certain Testimony of Charles McCreary ("Def.'s Scally Reply") (Doc. 217)).

Plaintiff moved for leave to file a surreply, (Pl.'s Mot. and Mem. for Leave to File a Surreply in Opp'n to Cree Inc.'s Daubert Mot. to Exclude Certain Testimony of Charles McCreary (Doc. 219)). Defendant responded to Plaintiff's motion for leave to file a surreply, (Doc. 222), and Plaintiff replied, (Doc. 225).

Plaintiff moved to exclude certain testimony of Dr. Bretschneider, (Doc. 199), and submitted a brief in support of its motion, (OptoLum, Inc.'s Mem. in Supp. of its Mot. to Exclude Certain Testimony of Dr. Eric Bretschneider ("Pl.'s Bretschneider Br.") (Doc. 200)). Defendant responded, (Def. Cree, Inc.'s Mem. in Opp'n to Pl. OptoLum, Inc.'s Mot. to Exclude Certain Testimony of Dr. Eric Bretschneider ("Def.'s

Bretschneider Resp.") (Doc. 203)); and Plaintiff replied, (Doc. 215).

On October 8, 2021, this court held an evidentiary hearing on the parties' motions to exclude certain expert testimony. (Minute Entry 10/08/2021.)

II. ANALYSIS

Federal Rule of Evidence 702 provides:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

- (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (b) the testimony is based on sufficient facts or data;
- (c) the testimony is the product of reliable principles and methods; and
- (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702. In Daubert v. Merrell Dow. Pharms., Inc., 509 U.S. 579 (1993), the Supreme Court clarified "that it is the duty of the trial court to perform the gatekeeping function with respect to expert testimony: 'the trial judge must ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable.'" United States v. Prince-Oyibo, 320 F.3d 494, 498 (4th Cir. 2003) (quoting Daubert, 509 U.S. at 589). The Supreme Court in Daubert provided a list of

non-exclusive factors a court should consider in assessing the reliability of expert testimony: (1) whether the particular scientific theory "can be (and has been) tested"; (2) whether the theory "has been subjected to peer review and publication"; (3) "the known or potential rate of error"; (4) the existence and maintenance of standards controlling the technique's operation; and (5) whether the technique has achieved general acceptance in the relevant scientific or expert community.

Daubert, 509 U.S. at 591.

A. Motion to Exclude Certain Testimony of Mr. Scally

Defendant moves to exclude certain testimony of Mr. Scally for three reasons: (1) Mr. Scally included a 5% "incremental value" to Defendant's brand in addition to the royalty rate for infringement; (2) Mr. Scally did not apportion his damages calculation; and (3) his opinion is based on unreliable facts. (Def.'s Scally Br. (Doc. 194) at 6-7.)

Mr. Scally opines "that a reasonable royalty equal to at least 10% of the net sales revenue generated through the sale of the accused Cree LED light bulbs represents the proper form of damages in this matter." (Scally Report (Doc. 299) at 6.) Mr. Scally further states in his report that "Cree expected that the benefit from the technology would extend beyond the Accused Products by enabling Cree to build a company-wide brand and thus

boost overall company sales. This incremental value is considered in my calculation of the 10% royalty rate[.]” (Id.) He thus concludes that “Cree would have been willing to pay an incremental rate of at least 5% in order to leverage the Accused Products to build the broader Cree brand, suggesting a final negotiated royalty rate of at least 10%.” (Id. at 67.)

In a patent infringement suit, damages shall “in no event [be] less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court.” 35 U.S.C. § 284. The Federal Circuit has explained that, in “litigation, a reasonable royalty is often determined on the basis of a hypothetical negotiation, occurring between the parties at the time that infringement began.” Uniloc USA, Inc. v. Microsoft Corp., 632 F.3d 1292, 1312 (Fed. Cir. 2011) (citing Wang Labs. Inc. v. Toshiba Corp., 993 F.2d 858, 869-70 (Fed. Cir. 1993)). “A comprehensive (but unprioritized and often overlapping) list of relevant factors for a reasonable royalty calculation appears in Georgia-Pacific Corp. v. United States Plywood Corp., 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970).” ResQNet.com, Inc. v. Lansa, Inc., 594 F.3d 860, 868-69 (Fed. Cir. 2010) (internal citation omitted).

The Federal Circuit’s embrace of the Georgia-Pacific factors reflects that an expert must rely on evidence “tied to

the relevant facts and circumstances of the particular case at issue and the hypothetical negotiations that would have taken place in light of those facts and circumstances at the relevant time." Uniloc USA, 632 F.3d at 1318.

1. Incremental Value

Defendant argues that "[t]his add-on brand development Incremental Rate is unreliable" because it "accounts for value other than the value that the patents-in-suit allegedly contributed to the Accused Products." (Def.'s Scally Br. (Doc. 194) at 19-20.) Plaintiff argues that it was reliable for Mr. Scally to consider the value of the use of the technology to Defendant beyond the technology itself. (Pl.'s Scally Resp. (Doc. 205) at 7.) Plaintiff cites Georgia-Pacific Factor 11 - the extent to which the infringer has made use of the invention; and any evidence probative of the value of that use - in support of that argument. (Id.)

Georgia-Pacific Factor 11 "informs the court and jury about how the parties would have valued the patented feature during the hypothetical negotiation." Lucent Techs., Inc. v. Gateway, Inc., 580 F.3d 1301, 1333 (Fed. Cir. 2009). "In doing so, Factor 11 relies on evidence about how much the patented invention has been used. Implicit in this Factor is the premise than an

invention used frequently is generally more valuable than a comparable invention used infrequently." Id.

Mr. Scally's report relies on a number of assumptions in defining the hypothetical royalty negotiation. Notably to the analysis contained herein, Mr. Scally recognized that success by Cree in the sale of LED lightbulbs required hitting a specific price point, which he identified as \$10.00. (Doc. 299 at 32.) Furthermore, Mr. Scally also assumed that the hypothetical license was non-exclusive. (Id. at 34.) Finally, Mr. Scally acknowledged that the look of the Cree bulbs, similar to traditional incandescent bulbs, was critical to the success of the product. (Id. at 50.)

Against the facts assumed by Mr. Scally as a basis for the hypothetical negotiation as to a royalty payment, Mr. Scally opined, inter alia, that the sale of LED bulbs by Defendant resulted in an increase in "brand value" resulting from the sale of the accused products. (Id. at 57.) In turn, the sale of the infringing LED bulbs placed "significant upward pressure" on the hypothetical negotiated royalty rate. (Id. at 61-62.) As a result, Mr. Scally concluded that there was an incremental value of the patents to Defendant in building its brand, and that Defendant would hypothetically pay in royalty 5% for that

factor, (id. at 62), resulting in a total royalty amount of 10%. Defendant challenges this 5% brand value calculation.

During Mr. Scally's deposition, he admitted that the 5% incremental rate accounts for value other than the value the patents contributed to the accused products. Mr. Scally stated that "brand" was something he considered in assessing the incremental value, and that he viewed "brand" as "something other than being able to make, use, and sell the accused lightbulbs." (Scally Dep. (Doc. 196-2) at 35-36.)

Q. Okay. So the value of the brand was something other than being able to make, use and sell the accused lightbulbs? Correct?

MR. MISIC: Objection.

A. Yes. It was something else.

BY MR. HARPER:

Q. Okay. And that something else was what you have labeled brand? Right?

MR. MISIC: Objection.

A. Yes.

BY MR. HARPER:

Q. And that 5 percent was a straight addition to the existing - to the 5 percent that you determined for the rest of the factors of your analysis? Correct?

MR. MISIC: Objection.

A. Yes. It is incremental.

(Id. at 36.)

Plaintiff's argument that under Georgia-Pacific Factor 11, Mr. Scally can consider the value of the Patents on Cree's overall brand and its effect on Cree's products other than the accused products appears contrary to the Federal Circuit's interpretation of Georgia-Pacific Factor 11. In Lucent Technologies, the Federal Circuit interpreted Factor 11 as considering how often the accused products were used by the infringer, not - as Plaintiff contends - how the patented technology affected the use of an infringer's other products or overall brand. See Lucent Techs., 580 F.3d at 1333. Because a plaintiff is entitled to damages only related to infringing activities, it is inappropriate for Mr. Scally to include in his damages calculation any value the Patents conferred on Cree's overall brand or its products other than the accused products. See Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc., 904 F.3d 965, 977 (Fed. Cir. 2018) ("A patentee is only entitled to a reasonable royalty attributable to the infringing features."); see also Enplas Display Device Corp. v. Seoul Semiconductor Co., 909 F.3d 398, 411-12 (Fed. Cir. 2018) (vacating a jury's damages award where the only evidence supporting the damages award was testimony from a damages expert that included non-infringing device sales in the royalty calculation).

While there may be circumstances under which a "brand value increase" might be a factor in assessing a reasonable royalty, this court finds that Mr. Scally's testimony does not meet the threshold requirements of Daubert and Federal Rule of Evidence 104 with respect to an opinion that brand value increase supports an upward royalty rate of 5%.

Federal Rule of Evidence 702 requires expert testimony be based on "sufficient facts or data," "the product of reliable . . . methods," and that the expert reliably apply "the principles and methods to the facts of the case." Fed. R. Evid. 702(b)-(d). Additionally, Federal Rule of Evidence 104 requires a trial court to determine whether these elements are met by a preponderance of the evidence before admitting expert testimony. Fed. R. Evid. 104(a). This court finds the brand value damage calculation is not based on sufficient facts, and there is insufficient data to support the opinion.

Mr. Scally presents information from both Cree and third parties that the sale of the infringing LED bulbs helped Cree build its "brand." While there may be certain logical force to Scally's analysis in assessing damages - that increase in brand value recognized by Cree through the sale of the infringing bulbs should be captured as damages - this court finds

Mr. Scally's conclusion in determining a reasonable royalty rate not supported by the assumptions and facts.

First, Mr. Scally's opinion is about a reasonable royalty arising from a hypothetical negotiation entered into prior to infringement. (Doc. 299 at 28.) However, the brand value calculation is based on facts and assumptions that occurred in a market not affected by, or that even addressed, a hypothetical non-exclusive licensing agreement. Mr. Scally's data is based upon hindsight, that is, Defendant's sales of infringing products and brand development in the absence of a non-exclusive license from OptoLum. Mr. Scally never explains how or why a hypothetical negotiation prior to infringement would take into consideration an increase in brand value from the use of a non-exclusive license from OptoLum or the relationship between a non-exclusive license and brand development in establishing the parameters of a hypothetical negotiation. Mr. Scally acknowledges Cree's success, if any, with respect to sales, were the result of a specific price point and the look of the bulb Cree developed. Resultingly, the principle applied - the calculation of a hypothetical reasonable royalty agreed-upon prior to infringement - is based upon post-infringement success on facts derived from the absence of a hypothetical licensing agreement and the payment of a royalty. While the "brand value"

increase might otherwise be compelling as a measure of wrongful profits, Mr. Scally's damage calculation is, as it must be, based on a hypothetical reasonable royalty.

Second, Mr. Scally offers no data or support to suggest any brand success could have been derived from product sales arising from a hypothetical non-exclusive license in the same way and manner that those sales occurred without a license agreement. That in turn makes it speculative that any brand success Cree may have realized from sales without a non-exclusive license agreement are probative of what facts or factors Cree or OptoLum might have hypothetically considered in negotiating a royalty with a component of brand value using a non-exclusive licensing agreement. It appears to this court that Mr. Scally's opinion - that brand value increase would have put upward pressure on the likely negotiated royalty - is entirely speculative. Mr. Scally offers no assumptions or facts to explain how a hypothetical, non-exclusive license negotiation would have been impacted by potential brand value increases or, more significantly, how those facts in turn would have impacted the calculation of a hypothetical reasonable royalty. Instead, Mr. Scally seems to assume, without explanation or support, that any brand value increases realized in the absence of a licensing agreement would have been recognized in a similar fashion during the

hypothetical negotiation prior to infringement. This determination should not be based on "a hindsight evaluation of what actually happened, but on the basis of what the parties to the hypothetical license negotiations would have considered at the time of negotiations." Hanson v. Alpine Valley Ski Area, Inc., 718 F.2d 1075, 1081 (Fed. Cir. 1983).

Third, even assuming that Plaintiff's interpretation of Georgia-Pacific Factor 11 is correct under certain circumstances, Mr. Scally fails to explain how or why the trademark contract he used for guidance - the G.E./Safety Quick contract and the Hoover/Capstone Industries contract - apply to the hypothetical royalty negotiation between OptoLum and Cree. No data, facts, or analysis are provided to explain whether the value of the trademark licenses is derived from total sales, non-exclusive licenses, unique products, ownership of technology, or anything else. The analysis appears to rely exclusively on "brand name," (Scally Report (Doc. 299) at 62), without any analysis of the parameters of the hypothetical negotiation, including the effect, if any, of the technology on

subject to a non-exclusive license instead of ownership of the technology.² (Id.)

Mr. Scally's royalty calculation includes a 5% "increase in brand value" that is not based on relevant facts or data and has not been shown to reliably apply the principles and methods to the facts of this case. A proffer of expert testimony must be reliable and may not be based on belief or speculation. Daubert, 509 U.S. at 592-93. Mr. Scally's opinion that the hypothetical calculation would have included a 5% increase for brand value should be excluded.

2. Entire Market Value Rule

This court further finds that Mr. Scally's damages opinion should not be excluded as a matter of law for failure to apportion.

"The entire market value rule is a narrow exception to [the] general rule" that "royalties be based not on the entire product, but instead on the 'smallest salable patent-producing unit.'" LaserDynamics, Inc. v. Quanta Computer, Inc., 694 F.3d 51, 67 (Fed. Cir. 2012) (quoting Garretson v. Clark, 111 U.S.

² Mr. Scally, in discussing brand development, quotes Cree extensively regarding the importance of Cree's technology. (See, e.g., Scally Report (Doc. 299) at 24 ("Cree itself called the introduction of the Filament Tower™ 'game-changing' [.]"); and id. at 59 ("[L]eading with innovation and building the Cree brand were the first and second priorities.").)

120, 121 (1884)). In other words, "[t]he entire market value rule allows for the recovery of damages based on the value of an entire apparatus containing several features, when the feature patented constitutes the basis for customer demand." Lucent Techs., 580 F.3d at 1336 (quoting TWM Mfg. Co. v. Dura Corp., 789 F.2d 895, 901 (Fed. Cir. 1986)). The entire market value rule is derived from Supreme Court precedent requiring that "[t]he patentee . . . must in every case give evidence tending to separate or apportion the defendant's profits and the patentee's damages between the patented feature and the unpatented features, and such evidence must be reliable and tangible, and not conjectural or speculative." Garretson, 111 U.S. at 121. The Supreme Court explained that "the entire value of the whole machine, as a marketable article, [must be] properly and legally attributable to the patented feature." Id. "Under the entire market value rule, if a party can prove that the patented invention drives demand for the accused end product, it can rely on the end product's entire market value as the royalty base." Commonwealth Sci. & Indus. Rsch. Organisation v. Cisco Sys., Inc., 809 F.3d 1295, 1302 (Fed. Cir. 2015) (emphasis added) (quoting LaserDynamics, 694 F.3d at 67).

The entire market value rule is "a demanding alternative to [the] general rule of apportionment." Power Integrations, 904 F.3d at 977 (citation omitted).

If the product has other valuable features that also contribute to driving consumer demand – patented or unpatented – then the damages for patent infringement must be apportioned to reflect only the value of the patented feature. This is so whenever the claimed feature does not define the entirety of the commercial product. In some circumstances, for example, where the other features are simply generic and/or conventional and hence of little distinguishing character, such as the color of a particular product, it may be appropriate to use the entire value of the product because the patented feature accounts for almost all of the value of the product as a whole.

Id. at 978 (citation omitted).

In Power Integrations, the royalty rate was premised on the patent's frequency reduction feature as driving consumer demand for the infringer's controller chips. Id. The plaintiff presented evidence that the frequency reduction feature was "essential to many customers," and "that some customers asked for the [patented] feature, that products with the [patented] feature outsold other products, and that technical marketing materials promoted the [patented] feature." Id. Further, both parties agreed that the accused products contained other valuable features. Id.

The Federal Circuit held that it is not enough to affirmatively prove that the patented feature is essential, or

that the product would not be commercially viable without the patented feature, or that customers would not purchase the product without the patented feature. Id. at 978-79. Instead, the patentee must prove that the other features do not cause consumers to purchase the accused product. Id. at 979-80. The patented feature must be the "sole driver of customer demand." Id. at 979. The court in Power Integrations then explained how a patentee proves the patented feature drives demand:

Where the accused infringer presents evidence that its accused product has other valuable features beyond the patented feature, the patent holder must establish that these features do not cause consumers to purchase the product. A patentee may do this by showing that the patented feature "alone motivates customers to purchase [the infringing product]" in the first place.

Id. (quoting LaserDynamics, 694 F.3d at 69). Because the patent owner "did not meet its burden to show that the patented feature was the sole driver of consumer demand," the Federal Circuit vacated the damage award. Id. at 979-80; see also Lucent Techs., 580 F.3d at 1337-38 (reversing the district court's decision where the jury applied the entire market value rule because "Lucent did not carry its evidentiary burden of proving that anyone purchased Outlook because of the patented method" where "Lucent's damages expert conceded that there was no 'evidence that anybody anywhere at any time ever bought Outlook . . . because it had a date picker'").

Plaintiff argues the patented technology enables the features of the Cree products that drove demand, and that therefore the entire market value rule is appropriate. (Pl.'s Scally Resp. (Doc. 205) at 15.) Defendant has presented evidence that the value of the technology should not be subject to the entire market value rule because features such as omni-directional light, similar form to incandescent bulbs, and price point were the features which drove demand. (Scally Report (Doc. 299) at 30.) On the other hand, Plaintiff has forecast evidence that the Filament Tower™ is "game changing" and allowed "LED bulbs to be introduced at a retail price point that gave consumers a reason to switch to LED lighting." (Id. at 24.) Mr. Scally's report identifies a statement from Cree's corporate marketing department that describes "the Filament Tower™ technology as an 'elegant solution' that not only . . . but also created the traditional 'omni-directional' light of incandescent A-type bulbs." (Id. at 45.) Mr. Scally's report also notes that Cree has said "Cree LED Filament Tower™ Technology represents a breakthrough in LED bulb design. It provides an optically centered and balanced light source within a real glass bulb that is nearly indistinguishable from a traditional incandescent filament." (Id. at 52.) Cree's own statements, as cited by Mr. Scally, support Plaintiff's contention that the Filament

Tower™ enabled the customer demand. This court is therefore unable to find, as a matter of law, that Plaintiff will be unable to show that the infringing technology is subject to the entire market value rule.

3. Facts Underlying Mr. Scally's Opinion

This court further finds that Mr. Scally's damages opinion is based on data sufficiently tied to the facts of this case. Defendant argues that Mr. Scally should not be permitted to testify because his opinion is based on information not tied to the facts of this case. (Def.'s Scally Br. (Doc. 194) at 31-43.) Specifically, Defendant contests Mr. Scally's reliance on (1) a [REDACTED]; (2) Degnan & Horton Survey; (3) Licensing Economics Review article; (4) RoyaltySource licenses; (5) prior Cree licenses; and (6) a sensitivity analysis. (Id.)

First, regarding Mr. Scally's consideration of the [REDACTED], Defendant argues it is unacceptable to use a party's [REDACTED]. (Id. at 31-32.) However, Defendant misconstrues Mr. Scally's use of the [REDACTED]. Unlike Defendant's assertion, Mr. Scally did not use the [REDACTED] but rather as consideration of Georgia-Pacific Factor 1 - the royalties received by the patentee for the licensing of the patents-in-suit, proving or tending to prove an established

royalty. (Sally Report (Doc. 299) at 34.) Here, Mr. Scally noted that the asserted patents have never been licensed but that [REDACTED]

[REDACTED] (Id.) Mr. Scally goes on to note that because OptoLum has never licensed the asserted patents and because [REDACTED]

[REDACTED] (Id.) Essentially, Mr. Scally noted the prior [REDACTED] and then explained why he valued [REDACTED] as neutral. This court finds Mr. Scally provided sufficient reasoning for his reliance on [REDACTED] [REDACTED] and his analysis was sufficiently tied to the facts of this case. Therefore, this court finds Mr. Scally's opinion should not be excluded because he relied in part on the [REDACTED]

Second, Defendant contests Mr. Scally's reliance on the Degnan & Horton survey because Mr. Scally does not know the technologies, licenses, and parties on which the survey is based. (Def.'s Sally Br. (Doc. 194) at 32-35.) Plaintiff responds that in considering Georgia-Pacific Factor 12 - the portion of the profit or the selling price that may be customary in the particular business or in comparable businesses to allow

for the use of the invention or analogous inventions - Mr. Scally reasonably relied on publicly available information in marketing surveys. (Pl.'s Scally Resp. (Doc. 205) at 21.)

"[T]o establish a reasonable royalty, the 'licenses relied on by the patentee in proving damages [must be] sufficiently comparable to the hypothetical license at issue in suit.'" Virnetx, Inc. v. Cisco Sys., Inc., 767 F.3d 1308, 1330 (Fed. Cir. 2014) (quoting Lucent Techs., 580 F.3d at 1325). Although "alleging a loose or vague comparability between different technologies or licenses does not suffice," LaserDynamics, 694 F.3d at 79, the Federal Circuit "ha[s] never required identity of circumstances[.]" Virnetx, 767 F.3d at 1330. Rather, the Federal Circuit has "long acknowledged that 'any reasonable royalty analysis necessarily involves an element of approximation and uncertainty.'" Id. (quoting Lucent Techs., 580 F.3d at 1325).

For example, in Virnetx, the Federal Circuit held the district court did not abuse its discretion in allowing the damages expert to rely on licenses that were either related to the actual patents-in-suit or were drawn to related technology. Id. The Federal Circuit noted that the differences between the licenses and the hypothetical negotiation between the parties

were presented to the jury, who ultimately determined the relevancy of those licenses. Id.

In Mr. Scally's report, he relies on the Degnan & Horton Survey for evidence of licensing rates depending on whether the technology is "revolutionary," a "major improvement," or a "minor improvement." (Scally Report (Doc. 299) at 64.) Based on Cree's own statements that the technology was "game-changing," Mr. Scally considered the technology would at least be considered a "major improvement." (Id.) This court finds the Degnan & Horton Survey is sufficiently tied to the facts of this case. Mr. Scally used the survey as evidence of the range of a reasonable royalty for patented technology that is a major improvement. Mr. Scally relied on Cree's own statements to reasonably determine the technology was at least a major improvement over prior LED lightbulbs. Therefore, this court finds Mr. Scally's opinion should not be excluded because he relied in part on the Degnan & Horton survey.

Third, Defendant argues the Licensing Economic Review article is not sufficiently tied to the facts of this case. (Def.'s Scally Br. (Doc. 194) at 35-37.) As part of Mr. Scally's consideration of Georgia-Pacific Factor 12, Mr. Scally relied on a Licensing Economics Review article on royalty rates from twenty-eight years' worth of licensing agreements, broken down

by industry. (Sally Report (Doc. 299) at 63-64.) Mr. Sally noted the median royalty rate for the Electrical and Electronics industry was 4.3%, and the median royalty rate for the Consumer Goods, Retail, and Leisure industry was 5.0%. (Id.)

This court finds the Licensing Economics Review article is sufficiently tied to the facts of this case. Although consumer goods and electrical and electronics may be broad categories that encompass other technology than LEDs, this is not a case where the subject matter of the licenses is not ascertainable from the evidence. See Lucent Techs., 580 F.3d at 1327-28. That the licenses relied on by Mr. Sally concern a broader category of patentable technology is not sufficient, as a matter of law, to warrant exclusion. See ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc., 694 F.3d 1312, 1333 (Fed. Cir. 2012) (affirming the district court's allowance of expert testimony where the expert relied on two licensing agreements, one of which post-dated the hypothetical negotiation, did not involve the patents-in-suit, and did not cover the technologies in the case, and the other involved both patents and software services). "The 'degree of comparability' of the license agreement [is] '[a] factual issue[] best addressed by cross examination and not by exclusion.'" Virnetx, 767 F.3d at 1331 (quoting ActiveVideo Networks, 694 F.3d at 1333). Therefore, this court finds

Mr. Scally's opinion should not be excluded because he relied in part on the Licensing Economics Review article.

Fourth, Defendant argues the RoyaltySource licenses are not sufficiently tied to the facts of this case because those licenses were trademark licenses. (Def.'s Scally Br. (Doc. 194) at 37-39.) Specifically, Defendant argues the RoyaltySource licenses are not comparable subject matter because they concerned OLEDs. (Id. at 37-38.) Additionally, Defendant argues the RoyaltySource licenses are not economically comparable because they "transferred world-wide patent rights and know-how" which the hypothetical negotiation would not have involved, and yet Mr. Scally did not adjust for that difference. (Id. at 38.)

This court finds that as a matter of law, Mr. Scally's opinion is not inadmissible because he relies in part on the RoyaltySource licenses. Mr. Scally explains in his report how he determined the degree of comparability between the RoyaltySource licenses and the hypothetical negotiation. (See Scally Report (Doc. 299) at 63.) He also concedes that:

the terms and technology of the license agreements identified . . . via RoyaltySource do not precisely align with the patented technology asserted in this matter nor the terms of the hypothetical negotiation . . . [but] they provide a representative range . . . of customary royalty rates actually paid by companies licensing technology related to LED lighting.

(Id. at 64.) Because Mr. Scally has sufficiently explained the comparability between the RoyaltySource licenses and the hypothetical negotiation, Mr. Scally's opinion should not be excluded as a matter of law. The degree of comparability of the RoyaltySource licenses is a question for the jury. Virnetx, 767 F.3d at 1331.

Fifth, Defendant contests Mr. Scally's reliance on prior Cree licenses because those licenses arose out of litigation and were cross-licenses that involved combinations of lump sum and running royalty payments. (Def.'s Scally Br. (Doc. 194) at 39-42.)

The Federal Circuit has held that a damages expert's opinion should not be excluded as a matter of law because the licenses relied on by the expert involve a lump sum rather than a running royalty. See Finjan, Inc. v. Secure Computing Corp., 626 F.3d 1197, 1212 (Fed. Cir. 2010) (affirming the damages award based on licenses involving a lump sum rather than a running royalty because "[those] differences permitted the jury to properly discount the . . . license").

Here, Mr. Scally explained the differences between the Cree licenses and the hypothetical negotiation in his report. (See Scally Report (Doc. 299) at 63.) Mr. Scally also notes that the agreements were negotiated in the context of ongoing litigation

but nevertheless "provide a representative range of customary royalty rates actually paid by companies licensing technology related to LED lighting." (Id.) Whether that opinion is credible is for the jury to decide. Virnetx, 767 F.3d at 1331. Therefore, this court finds that Mr. Scally's opinion should not be excluded because he relies in part on the Cree licenses.

Finally, Defendant contests Mr. Scally's sensitivity analysis and argues 20% is unsupported by the facts of this case. (Def.'s Scally Br. (Doc. 194) at 42.) Plaintiff responds that Mr. Scally uses 20% as a "sanity check" to show that his opinion of a reasonable royalty is reasonable. (Pl.'s Scally Resp. (Doc. 205) at 26.) Mr. Scally opines that "if Cree paid a 20% royalty rate on the Accused Sales from FY13 to FY18, the median gross profit margin of Cree remains constant at 30%." (Scally Report (Doc. 299) at 67.)

This court finds that, while the logic of Mr. Scally's sensitivity analysis may be appealing, a reasonable royalty of 20% is not justified by the evidence relied upon by Mr. Scally. A sensitivity analysis showing that Cree's profit margin remains constant despite paying a royalty on the Accused Sales is plainly relevant to a determination of a reasonable royalty because it tends to make it more probable that Mr. Scally's proffered royalty rate is reasonable. See Fed. R. Evid. 401.

However, this court finds that because 20% is not supported by the evidence, the jury would be misled by an implicit suggestion that 20% is reasonable, when in fact that number is unsupported by the evidence. See Fed. R. Evid. 403. Accordingly, this court finds that Mr. Scally may testify about performing a sensitivity analysis, and that his sensitivity analysis showed that a royalty of 5% (his admissible royalty rate) is reasonable, but he may not testify about a 20% royalty.

B. Motion to Exclude Certain Testimony of Mr. McCreary

Plaintiff seeks to have Mr. McCreary testify as an expert at trial and give an opinion on infringement. Mr. McCreary opines that certain Cree products infringed claims 2-4 and 6-9 of the '303 patent and 1-3, 5-8, 14 and 16 of the '028 patent. (See McCreary Report - Def.'s Excerpts (Doc. 198-5) at 2-5.) Defendant moves to exclude certain testimony of Mr. McCreary because (1) Mr. McCreary is not qualified; and (2) Mr. McCreary's opinion lacks a reliable methodology. (Def.'s McCreary Br. (Doc. 198) at 5-6.) Plaintiff responds that Mr. McCreary is qualified to testify as an expert and used a reliable methodology in forming his opinion. (Pl.'s McCreary Resp. (Doc. 209) at 2-3.)

1. Mr. McCreary's Qualifications

Defendant argues that Mr. McCreary is not qualified as an expert to offer an opinion on infringement. (Def.'s McCreary Br. (Doc. 198) at 35-41.) Specifically, Defendant takes issue with Mr. McCreary's lack of experience designing or studying LED lightbulbs. (Id. at 38-39.) Although Mr. McCreary's deposition testimony reflects that he does not have experience with LED lightbulbs, he does have experience in the general area of thermal analysis. Further, Mr. McCreary's report reflects he has experience in thermal modeling, thermal analysis, and design and manufacturing of numerous LED lighting products. (McCreary Report - Pl.'s Excerpts (Doc. 212-2) at 9-11.)

Defendant argues that Mr. McCreary's "testimony cannot be elicited under Fed. R. Evid. 702 absent some experience in the specific design of LED light bulbs." (Def.'s McCreary Reply (Doc. 217) at 21.) That is not so. In Belk, Inc. v. Meyer Corp., U.S., the Fourth Circuit upheld the district court's refusal to exclude an expert as unqualified where the expert had general experience in survey design but had no experience designing trade dress or trademark surveys. 679 F.3d 146, 162 (4th Cir. 2012). The Fourth Circuit noted that the party seeking exclusion of the expert "provide[d] no support for its argument that consumer survey research in trade dress litigation is sui

generis such that an expert's lack of experience in designing these specific surveys necessarily disqualifies him from giving an expert opinion." Id.

Here, Defendant has not shown that LED lightbulbs are so unique such that Mr. McCreary must have firsthand experience with them to opine on infringement. Mr. McCreary's curriculum vitae indicates he has experience in the design and manufacture of LED lighting products and in thermal design and analysis. This shows that Mr. McCreary has the requisite skill, training, experience, knowledge, or education in the general area of thermal analysis/LED lighting. See Fed. R. Evid. 702; Kumho Tire Co. v. Carmichael, 526 U.S. 137, 147 (1999).

Further, Plaintiff argued at the October 8 evidentiary hearing that the relevant question is not whether the LEDs are "configured to" (or specifically designed to) conduct heat away from solid state light sources. Rather, Plaintiff asserts the relevant question is whether the elongate thermally conductive member is specifically designed to conduct heat away from said solid state light sources to fluid contained by said elongate thermally conductive member. This court agrees. The "configured to" claim limitation is related to the elongate thermally conductive member, not the LEDs. See Patent '028 (Doc. 32-2) col. 4, lines 43-53. This court has considered Mr. McCreary's

qualifications as they relate to the offered opinions and finds no reason to exclude the challenged expert opinion based on the standards articulated in Daubert and Fed. R. Evid. 702.

Mr. McCreary's experience (or lack thereof) in the design of LED lightbulbs can be appropriately handled through "[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof," Summit 6, LLC v. Samsung Elecs. Co., 802 F.3d 1283, 1296 (Fed. Cir. 2015), and left to the factfinder to determine credibility.

2. Mr. McCreary's Methodology

Defendant also argues that Mr. McCreary's testimony should be excluded because Mr. McCreary fails to identify any methodology for his selection of the A19 Gen 1 and A19 Gen 2 computer models as representative of 47 Single Ring Accused Products. (Def.'s McCreary Br. (Doc. 198) at 24-26.) Similarly, Defendant argues Mr. McCreary fails to identify any methodology for his selection of the A21 Gen 1 and Par38 computer models as representative for the remaining 26 accused products. (Id. at 31-32.) Plaintiff responds that Mr. McCreary's opinion "is based upon a comprehensive and detailed methodology." (Pl.'s McCreary Resp. (Doc. 209) at 6.)

In forming his opinion, Mr. McCreary "review[ed] the '303 and '028 patents and their file histories, . . . examined

various samples of the Cree LED Bulbs as well as Cree produced SOLIDWORKS® assembly files, technical documentation, specifications, and literature concerning the Cree LED Bulbs” (McCreary Report - Def.’s Excerpts (Doc. 198-5) at 6.) Defendant produced six SOLIDWORKS files that were supposed to be representative of at least some of the accused products. (McCreary Report - Pl.’s Excerpts (Doc. 212-2) at 13.) Mr. McCreary and Plaintiff’s counsel identified several deficiencies in this production. (Id. at 14-16.) Mr. McCreary then created SOLIDWORKS assembly files based on the Cree-produced SOLIDWORKS files and modified Cree’s files to fix the deficiencies. (Id. at 16-17.) Defendant later informed Plaintiff of the errors in its assembly files and provided corrected SOLIDWORKS assembly files. (Id. at 17.) Mr. McCreary compared the corrected files with his model “and found that the changes mirrored the changes [he] had already made with the exception of the shape of the LEDs that [he] had added to [his] own files which was immaterial to the thermal simulation and its results.” (Id.) He then performed thermal simulations in SOLIDWORKS, which led him to conclude that the SOLIDWORKS models were representative of the accused products, and therefore Cree’s products infringed the Patents. (McCreary Report - Def.’s Excerpts (Doc. 198-5) at 8-12.) This court finds that

Mr. McCreary has sufficiently explained his methodology for comparing the accused products to the Patents and that exclusion of Mr. McCreary's infringement opinion is inappropriate.

This court finds that Mr. McCreary's methodology was based on reliable principles and was sufficiently tied to the facts of this case. Mr. McCreary reviewed Cree's own SOLIDWORKS assembly files, in which he noticed several errors and fixed the deficiencies based on his review of physical samples of Cree bulbs. Based on his experience in the field of LED lighting, he determined which accused products were represented by the assembly files. He then used the SOLIDWORKS files to perform thermal analysis and determined that the accused products infringed the Patents. Mr. McCreary's methodology was structurally sound and tied to the facts of this case.

That Mr. McCreary's methodology was not peer-reviewed or published does not require exclusion. "Where an expert otherwise reliably utilizes scientific methods to reach a conclusion, lack of [peer review or publication] may go to the weight, not the admissibility of the expert's testimony." Summit 6, 802 F.3d at 1298 (quoting Knight v. Kirby Inland Marine Inc., 482 F.3d 347, 354 (5th Cir. 2007)) (internal quotation marks omitted). "To the extent [Mr. McCreary's] credibility, data, or factual assumptions have flaws, these flaws go to the weight of the

evidence, not to its admissibility." Id. at 1299. Therefore, this court will deny Defendant's motion to exclude Mr. McCreary's testimony.³

C. Motion to Exclude Certain Testimony of Dr. Bretschneider

Plaintiff seeks to exclude certain testimony of Dr. Bretschneider for four reasons: (1) Dr. Bretschneider's testimony "asked the wrong question"; (2) Dr. Bretschneider's testing protocol was flawed; (3) the testing was executed in a flawed way; and (4) key evidence is no longer available for inspection. (Pl.'s Bretschneider Br. (Doc. 200) at 23, 25, 30, 35.)

Defendant seeks to have Dr. Bretschneider testify at trial regarding non-infringement. (Id. at 2.) To support his opinion that Cree did not infringe OptoLum's patents, Dr. Bretschneider designed an experiment to test his opinion. (Bretschneider Am. Report (Doc. 201-3) ¶ 337.) Dr. Bretschneider's experiment was

³ This court finds that Defendant's reply did not raise new arguments, and therefore Plaintiff's motion for leave to file a surreply, (Doc. 219), should be denied. In this district "[s]urreplies are generally disfavored." Olvera-Morales v. Int'l Labor Mgmt. Corp., 246 F.R.D. 250, 254 (M.D.N.C. 2007). "Generally, courts allow a party to file a surreply only when fairness dictates based on new arguments raised in the previous reply." DiPaulo v. Potter, 733 F. Supp. 2d 666, 670 (M.D.N.C. 2010). This court finds Plaintiff has failed to demonstrate that fairness "justif[ies] the additional filing." Hunter v. Town of Mocksville, 271 F. Supp. 3d 787, 791 n.2 (M.D.N.C. 2017).

"designed to prove that the Accused Bulbs do not comprise 'an elongate thermally conductive member configured to conduct heat to fluid therein.'" (Pl.'s Bretschneider Br. (Doc. 200) at 23.) He conducted "a series of thermal analyses to evaluate the impact of any heat conducted to air contained within the heat sink tower structures in different bulbs" by directly measuring the temperature within the accused products. (Bretschneider Am. Report (Doc. 201-3) ¶ 337.)

1. Relevance of Experiment to Claim Limitation

Plaintiff argues Dr. Bretschneider's testimony should be excluded because his experiment is not relevant to the claim element it purports to address. (Pl.'s Bretschneider Br. (Doc. 200) at 23-25.) Defendant responds that the data from Dr. Bretschneider's experiment "addresses the infringement allegation because, in the absence of at least a detectable effect from airflow in the tower structure, a heat sink structure has not been specifically designed to transfer heat to the airflow." (Def.'s Bretschneider Resp. (Doc. 203) at 25 (citing Bretschneider Am. Report (Doc. 201-3) ¶ 469).) The relevant claim limitation for purposes of Dr. Bretschneider's opinion is the "configured to" limitation: "said elongate thermally conductive member being configured to conduct heat away from said light emitting diodes to fluid contained by said

elongate thermally conductive member." Patent '303 (Doc. 32-1) col. 4, lines 43-46; Patent '028 (Doc. 32-2) col. 4, lines 38-31.

Dr. Bretschneider's experiment sought to determine what happens to the "conduction of heat to a fluid inside the filament tower" of the accused products. (See Bretschneider Dep. (Doc. 201-6) at 49:4-9.) This court finds that Dr. Bretschneider's experiment is sufficiently related to the "configured to" claim element. The "configured to" claim element concerns the elongate thermally conductive member being specifically designed to conduct heat away from the LEDs. If the accused products are also specifically designed to conduct heat away from the LEDs, then the accused products would infringe the Patents. Dr. Bretschneider's opinion is that the accused products do not meet the "configured to" claim limitation because there were no noticeable differences in temperature inside the filament towers, and therefore the accused products do not infringe. (Bretschneider Am. Report (Doc. 201-3) ¶ 192.) Dr. Bretschneider's experiment also serves to rebut Plaintiff's expert's opinion on infringement. (Id. ¶ 591.) Because Dr. Bretschneider sought to determine whether the accused products met the "configured to" claim element, his experiment is relevant to the infringement claims in this case.

2. Dr. Bretschneider's Methodology

Plaintiff also argues that Dr. Bretschneider's testimony should be excluded because his methodology was flawed. (Pl.'s Bretschneider Br. (Doc. 200) at 25-30.) Defendant responds that Dr. Bretschneider's report reflects he used reliable methodology based on industry standards, and his experiment was replicable and controlled for error. (Def.'s Bretschneider Resp. (Doc. 203) at 30; Bretschneider Am. Report (Doc. 201-3) ¶ 338.)

This court finds that Dr. Bretschneider used reliable methodology. Based on Dr. Bretschneider's experience designing, manufacturing, testing, and developing LED lightbulbs as well as his experience developing and monitoring testing procedures and standards for LED lightbulbs, Dr. Bretschneider developed his testing methodology and incorporated appropriate industry protocols to ensure reliability and accuracy of the data. (Bretschneider Am. Report (Doc. 201-3) ¶ 338.) Dr. Bretschneider used "industry accredited test facilities, properly calibrated of the testing equipment and measurement tools, industry standard environmental conditions and industry standard statistical data analysis." (Id.) In short, Dr. Bretschneider's experience with LED lightbulbs and testing LED lightbulbs informed his methodology.

Plaintiff points to the foam used to block air flow in the filament tower as evidence of a flawed methodology. (Pl.'s Bretschneider Br. (Doc. 200) at 25.) Plaintiff complains that it is impossible to know the thermal properties of the foam used by Dr. Bretschneider. (Id.) Dr. Bretschneider explains why he used the foam in his report. (Bretschneider Am. Report (Doc. 201-3) ¶ 342.) "Open celled foam was chosen over closed cell foam to minimize any pressure applied to the thermocouple inside the filament tower. Pressure applied to the thermocouple could shift its position relative to the interior surface and create temperature artifacts that would have impacted the integrity of the data." (Id.) Plaintiff has not offered any reason why it was inherently unreliable for Dr. Bretschneider to use that foam or why Plaintiff is not able to test the foam itself to determine its thermal properties. Plaintiff concedes the foam used by Dr. Bretschneider is readily available for purchase at major retailers. This court finds Plaintiff's reasons for exclusion based on Dr. Bretschneider's methodology to be insufficient. Defendant has met its burden to show that Dr. Bretschneider's methodology was reliable.

3. Dr. Bretschneider's Application of Methodology

Plaintiff further argues that Dr. Bretschneider did not reliably apply his methodology because his protocol was not in

writing and the technicians were unqualified. (Pl.'s Bretschneider Br. (Doc. 200) at 30-31.) Defendant responds that Dr. Bretschneider reliably applied the methodology set forth in his expert report. (Def.'s Bretschneider Resp. (Doc. 203) at 34.)

Plaintiff points out that the testing procedures called "foam in and foam out" testing, but the data reflects some of the technicians first measured temperature with foam out and then with foam in the filament tower. (Pl.'s Bretschneider Br. (Doc. 200) at 34.) However, Plaintiff has not offered a reason as to why this affects the reliability of Dr. Bretschneider's application of his methodology. For example, Plaintiff does not argue that the temperature results would be different if Dr. Bretschneider first measured the temperature with the foam out rather than with the foam in. Plaintiff will have the opportunity at trial to test the credibility of Dr. Bretschneider's conclusions, but that is not a matter for this court to decide. See Gen. Elec. Co. v. Joiner, 522 U.S. 136, 154 (1997) (Stevens, J., concurring in part and dissenting in part) ("Daubert quite clearly forbids trial judges to assess the validity or strength of an expert's scientific conclusions, which is a matter for the jury."). Regarding the supervision of the experiment, Dr. Bretschneider testified at his deposition

that he used his experience and knowledge to train the technicians running his experiment. (See Bretschneider Dep. (Doc. 201-6) at 82:16-83:17.) He also spent several days observing the actual testing. (Id. at 87:13-17.) This court finds that Defendant has met its burden to show Dr. Bretschneider reliably applied his methodology and Plaintiff has failed to prove otherwise.

4. Unavailability of Inspection of Experiment

Finally, Plaintiff argues that Defendant should be sanctioned for destruction of evidence. (Pl.'s Bretschneider Br. (Doc. 200) at 35.) Defendant responds that all of Dr. Bretschneider's sample lightbulbs are preserved and will be used at trial. (Def.'s Bretschneider Resp. (Doc. 203) at 37.) Defendant gave Plaintiff the opportunity to inspect the lightbulbs during discovery. (Id.) Plaintiff essentially complains that it did not have the opportunity to inspect the lightbulbs when the foam was inside the filament tower. (Pl.'s Bretschneider Br. (Doc. 200) at 35.) However, Plaintiff cites no rule that would have required Defendant to have made available for inspection Dr. Bretschneider's experiment at every stage of the experiment. This court finds Plaintiff's dissatisfaction with the state of the sample lightbulbs insufficient to exclude Dr. Bretschneider's testimony.

In conclusion, this court is satisfied that Dr. Bretschneider's testimony comports with Federal Rule of Evidence 702 and Daubert. Therefore, this court will deny Plaintiff's motion to exclude Dr. Bretschneider's testimony.

III. CONCLUSION

For the reasons set forth above,

IT IS THEREFORE ORDERED that Defendant's Daubert Motion Precluding Certain Testimony of William B. Scally, (Doc. 193), is **GRANTED**.

IT IS FURTHER ORDERED that Defendant's Daubert Motion to Exclude Certain Testimony of Charles McCreary, (Doc. 197), is **DENIED**.

IT IS FURTHER ORDERED that Plaintiff's Motion to Exclude Certain Testimony of Dr. Eric Bretschneider, (Doc. 199), is **DENIED**.

IT IS FURTHER ORDERED that Plaintiff's Motion for Leave to File a Surreply, (Doc. 219), is **DENIED**.

IT IS FURTHER ORDERED that this Memorandum Opinion and Order is **FILED UNDER SEAL** and the parties shall file, within ten (10) days of the filing of this Opinion, a joint report identifying the information in the Opinion, if any, they contend should be redacted, along with an explanation of the basis for their proposed redactions and a draft of this Opinion with those

proposed redactions. Because information contained herein will likely be considered confidential information by the parties, this Opinion shall remain sealed until the parties have had an opportunity to submit their requested redactions.

This the 24th day of November, 2021.


United States District Judge